

AMENDMENTS TO THE CLAIMS:

1. (currently amended) An endoscopic stapling assembly for securing tissue internal to the body, utilizing a flexible endoscope, comprising:

a staple for clamping or securing tissue inside of the body;

means operatively engageable with said staple for securing said staple in a closed position once staple is positioned and closed on desired tissue, said means for securing said staple in said closed position including a backbone made of rigid material having a pair of legs slidable over a backside of said staple and securable firmly over the closed staple, said legs having inwardly extending protrusions engageable in notches or recesses provided in said staple for locking into place over said closed staple;

~~means for providing a working channel for a tubular member carrying active~~ stapler components; and

means, operatively connected to said ~~means for providing~~ tubular member, for holding said staple during deployment thereof and manipulating said staple into an open or closed position, said active stapler components being operatively connected to said means for holding and manipulating, for operating same; ~~and~~

~~means for holding additional staples to facilitate loading of said additional staples into said means for holding and manipulating.~~

2. (original) The endoscopic stapling assembly in accordance with claim 1, wherein said staple is biased to an open position having an open-position angle greater than an open-position angle of the staple holder component.

3. (original) The endoscopic stapling assembly in accordance with claim 2, wherein said staple is insertable into tissue for clamping together opposing segments of tissue.

4. (original) The endoscopic stapling assembly in accordance with claim 2, wherein said staple is made from shape memory or flexible metal.

5. (canceled)

6. (original) The endoscopic stapling assembly in accordance with claim 2 wherein said staple is configured with opposing legs of a single folded over material, said legs being formed in an arc configuration, said legs having distal tips that touch one another when said staple is in a closed position, said distal tips of said legs being pointed.

7. (canceled)

8. (currently amended) The endoscopic stapling assembly in accordance with claim [[7]] 1, wherein said means for securing said staple in a closed position includes means for advancing said backbone over said staple, said means for advancing including a push bar, said push bar being connected to a handle mechanism at a proximal end of said ~~means for providing a working channel~~ tubular member.

9. The endoscopic stapling assembly in accordance with claim 1, wherein said means for holding and manipulating comprises formed metal components connected to a drive-wire and handle mechanism.

10. The endoscopic stapling assembly in accordance with claim 9 wherein said formed metal components are comprised of opposing jaws, whereby opposing faces or surfaces of the jaws are formed to securely hold said staple, and wherein said jaws are adapted to enter and grasp tissue.

11. (currently amended) The endoscopic stapling assembly in accordance with claim 10 wherein distal ends of said jaws are pointed for enabling said jaws to enter targeted tissue, said means for holding and manipulating including means for operating said jaws to clamp the staple closed over the tissue, said jaws being provided along mutually facing surfaces with grooves for seating said staple ~~and allowing for said backbone to slide over the closed staple.~~

12. The endoscopic stapling assembly in accordance with claim 10 wherein jaws are attached to a drive mechanism that opens and closes said jaws, said drive mechanism being attached to a handle mechanism.

13. (currently amended) The endoscopic stapling assembly in accordance with claim 10, further comprising means for holding additional staples to facilitate loading of said additional staples into said means for holding and manipulating, wherein said jaws

are re-loadable with additional staples and backbone locking elements from said means for holding additional staples.

14. (currently amended) The endoscopic stapling assembly in accordance with claim 1, wherein said ~~means for providing a working channel comprises a distal end connected to a staple deployment mechanism,~~ tubular member has a proximal end connected to an actuation and handle mechanism, said ~~means for providing a working channel~~ tubular member comprising at least one lumen-forming elongate tube made of a flexible material and having ~~[[a]]~~ said proximal and ~~a~~ distal end.

15. (original) The endoscopic stapling assembly in accordance with claim 1, wherein said means for holding and manipulating includes a pair of opposed jaws and a drive mechanism operatively coupled to said jaws, said drive mechanism comprising a handle mechanism composed of multiple sliding components and further comprising a drive-wire connected to said jaws and at least one of said sliding components, and a longitudinally displaceable push bar.

16. (currently amended) The endoscopic stapling assembly in accordance with claim 1, further comprising means for holding additional staples to facilitate loading of said additional staples into said means for holding and manipulating, wherein said means for holding additional staples comprises a tray with preformed holes to securely hold staples in an open configuration, said tray also provided with orientation structure for maintaining a plurality of backbones at proximal ends of the staples in said tray, said

backbones being locking elements engageable with the respective staples to maintain the staples in a closed post-firing configuration.

17. (canceled)

18. (currently amended) The staple assembly in accordance with claim ~~[[17]]~~ 30, wherein said ~~means for clamping or securing tissue inside of the body comprises a staple capable of being opened and closed, said staple being~~ is biased to an open position, said staple having a biased open position angle that is ~~[[is]]~~ greater than an open position angle of a staple holder component.

18. (canceled)

19. (currently amended) The staple assembly in accordance with claim ~~[[17]]~~ 30, wherein said staple is made from shape memory or flexible metal.

20. (canceled)

21. (currently amended) The staple assembly in accordance with claim ~~[[17]]~~ 30 wherein said ~~means for clamping or securing~~ staple includes opposing legs of a single folded over member, said legs being formed in an arc configuration, said legs having distal tips that touch when said legs are in a closed position, said distal tips of said legs being pointed.

22. (canceled)

23. (canceled)

24. (currently amended) An endoscopic staple and stapler assembly for securing tissue internal to the body, comprising:

a staple holder component;

a staple capable of being opened and closed, said staple being releasably held by said staple holder component, said staple being biased to an open position, said staple having a biased open position angle that is greater than an open position angle of the staple holder component, said staple being insertable into organic tissue for clamping together opposing segments of said tissue, said staple being made from shape memory or flexible metal, said staple having opposing legs of a single folded over member, said legs being formed in an arc configuration, said distal tips of said legs being pointed for the purpose of clamping or entering tissue for securing tissue inside of the body;

a backbone made of rigid material, slidable over a backside of said staple, said staple having notches along said backside to guide, accept, and secure said backbone firmly over the staple in a closed position once said staple is positioned and closed on desired tissue;

~~a push bar~~ pusher member, for advancing the backbone over said staple, said ~~push bar~~ pusher member being temporarily coupled to said backbone;

said staple holder component including a pair of formed opposing jaws, opposing edges of said jaws being formed to securely hold said staple, ~~said jaws being adapted to enter and grasp tissue~~, said jaws being attached to a drive mechanism that opens and closes said jaws, ~~the jaws grasping targeted tissue and clamping the staple closed over the tissue while the backbone is slid over said closed staple~~;

an elongate tube with a distal end being connected to said jaw mechanism, a proximal end connected to an actuation and handle mechanism, said elongate tube having at least one lumen and being made of a flexible material, for providing a working channel for active stapler components, securely connected to said staple holder; and

a handle mechanism, for actuation and manipulation of invention, securely connected to said elongate tube, and operatively connected to said ~~push bar~~ pusher member.

25. (canceled)

26. (new) The staple assembly in accordance with claim 30, wherein said staple is insertable into tissue for clamping together opposing segments of the tissue.

27. (new) An endoscopic stapling assembly for securing tissue internal to the body, utilizing a flexible endoscope, comprising:

a staple for clamping or securing tissue inside of the body;

a backbone member operatively engageable with said staple for securing said staple in a closed position once staple is positioned and closed on desired tissue, said

backbone member having a pair of legs slidable over a backside of said staple and securable firmly over the closed staple;

a tubular member having a working channel;

a pusher member at least partially disposed in said working channel; and

jaws operatively connected to said tubular member for holding said staple during deployment thereof and manipulating said staple into an open or closed position,

said backbone member being provided at a proximal end with a cutout out or recess receiving said pusher member.

28. (new) An endoscopic stapling assembly for securing tissue internal to the body, utilizing a flexible endoscope, comprising:

a staple for clamping or securing tissue inside of the body;

means operatively engageable with said staple for securing said staple in a closed position once staple is positioned and closed on desired tissue;

means for carrying active stapler components; and

means, operatively connected to said means for carrying, for holding said staple during deployment thereof and manipulating said staple into an open or closed position, said active stapler components being operatively connected to said means for holding and manipulating, for operating same,

wherein said means for holding and manipulating comprises opposing jaws having opposing faces or surfaces formed to securely hold said staple.



29. The endoscopic stapling assembly in accordance with claim 28 wherein distal ends of said jaws are pointed for enabling said jaws to enter targeted tissue, said means for holding and manipulating including means for operating said jaws to clamp the staple closed over the tissue, said jaws being provided along mutually facing surfaces with grooves for seating said staple.

30. (new) A staple assembly for use in rigid or flexible endoscopy for securing tissue internal to the body comprising:

a staple for clamping or securing tissue inside of the body, said staple being provided on an outer side, along each of two oppositely facing surfaces, with a smooth groove segment and a notch at a distal end of the respective groove segment; and

a backbone element, engageable with said staple, for locking the staple in a closed position once the staple is positioned and closed on desired tissue, said backbone element including a pair of substantially rigid legs each having a protrusion extending towards the other leg and engageable in the notch on a respective one of said oppositely facing surfaces, said backbone element being provided on a proximal side with a recess or seat for coupling to a pusher member.